

Monument Peak Hazardous Fuels Reduction Project

Project ID: 3248

Status: Current

Fiscal Year: 2016

Submitted By: Kelly Cornwall

Total Acres: 4,124

Project Manager: Kelly Cornwall

PM Agency: U.S. Forest Service

PM Office: Richfield Ranger District

Lead: U.S. Forest Service

WRI Region: Southern

Description:

Re-introduction of fire to the ecosystem through prescribed burning approximately 3,036 acres. These treatments would improve wildlife habitat, structural diversity, promote aspen regeneration, and reduce the hazardous fuel loading.

Location:

The Monument Peak Hazardous Fuels Reduction Project is located on the Richfield Ranger District of the Fishlake National Forest on the east side of Monroe Mountain. The project area is approximately 2 miles northwest of Koosharem, Utah.

PROJECT NEED

Need For Project:

By comparing the existing condition with the desired condition the Richfield Ranger District has determined there is a need to re-introduce fire to the area. Mixed conifer stands dominate the northern and northeastern slopes of the proposed treatment area. The average canopy closure for the area is 60%, which is the percent at which crowns begin to interlock. Close crown spacing provides potential for high severity and intense crown fires. Aspen stands are spread across the east, west, and south facing slopes at the higher elevations of the project area. Encroachment from spruce/fir species is occurring in the aspen stands. Mountain Mahogany and Gambel Oak mixed with other shrubs comprise the mid elevation ranges. Pinyon/Juniper, sagebrush, grasses and forbs are found at the lower elevations of the project area. Excessive fuel loads, historical fire suppression practices, the presence of ladder fuels, and downed woody debris makes the project area prone to uncharacteristic high intensity and high severity fires. Fuel loading within the project area is estimated to be 3 tons per acre in the sagebrush vegetation type, 15-36 tons per acre in the aspen type, and up to 90 tons per acre within the mixed conifer type. Flame lengths under this type of condition have the potential of reaching 100 feet. Rate of spread under current conditions ranges from 17 chains per hour to over 530 chains per hour. Current fire regime is listed at 4 with a condition class of 3. Condition class measures the departure from a functioning ecosystem. The three condition classes categorize and describe vegetative composition and structure conditions that currently exist inside the fire regime groups. The risk of loss of key ecosystem components from unwanted wildland fire increases from condition class 1 (lowest risk) to condition class 3 (highest risk)

Fire would reset much of the area into an early successional vegetative condition and improve habitat effectiveness for a large variety of avian and mammalian species. If let go into a no-treatment type of management a late successional over grown unhealthy forest would lead to a lack of habitat conditions to support healthy wildlife populations into the future.

Close communication with the Monroe Mountain Working Group (MMWG) for this project is occurring. The MMWG consists of 21 stakeholders.

Objectives:

Project objectives for re-introducing fire to the ecosystem within broadcast prescribed fire units of the project include:

- Improve a variety of wildlife habitat by introducing fire into the ecosystem. Summer, transition, and fall elk and deer habitat would be improved to help sustain viable populations and meet state plan objectives.
- reduction of fuel loading in all vegetative cover types,
- reduction of potential fire intensity and rates of spread for wildfires,
- reduction of canopy closure,
- reduction of conifer encroachment in aspen stands promoting aspen regeneration and recruitment,
- reduction in condition class and fire regime values

Improve watershed health/water quality.

Threats / Risks:

The future of a no action management strategy in the project area will lead to a decrease of wildlife habitat effectiveness due to the loss of vegetative diversity. Monroe Mountain has shown a decrease of 70% of historical aspen habitat acres due to conifer encroachment. Close crown spacing within the mixed conifer will continue to provide potential for high severity and intense crown fires. Aspen stands are spread across the higher elevations of the project area. Encroachment from spruce/fir species will continue in the aspen stands. Excessive fuel loads, historical fire suppression practices, the presence of ladder fuels, and downed woody debris makes the project area prone to uncharacteristic high intensity and high severity fires.

The re-introduction of fire to the ecosystem would move the stands toward properly functioning condition in terms of composition (species diversity) and density (crown spacing and fuel loading). In addition the treatments would promote aspen regeneration and recruitment, and reduce the hazardous fuel loading; mitigating the risks and damage associated with a high intensity and severity wildfire. By enhancing structural and age class diversity, reducing the hazardous fuel load, and promoting aspen regeneration/recruitment the proposed project would improve conditions for wildlife, livestock, and timber species. In addition, the risk for uncharacteristic wildfire would be reduced adding a layer of protection from such events to adjacent landowners and Forest Service owned improvements.

Without project implementation, the area would likely remain suitable until an uncharacteristic event occurs. The area would remain susceptible to wildfire. A wildfire would likely occur during the summer months when the area impacted could be larger, without a broken mosaic pattern. In addition, the severity could be high and plant recovery and re-establishment may take longer. This type of wildfire could be stand replacing on a large scale that it would create areas of even age forest succession and be different than the type of forest that exist today.

Relation To Management Plan:

The desired conditions for this project are consistent with Fishlake National Forest goals and objectives found in Chapter IV of the Forest Plan, Fishlake Fire Amendment, and the Utah Fire Amendment. The proposed treatment units are within management areas 4B - Habitat for Management Indicator Species, 6B – Livestock Grazing, 9A-Riparian Area Management and 9F - Improved Watershed Condition. The relevant goals and objectives are listed below:

- Ecosystems are restored and maintained, consistent with land uses and historic fire regimes, through wildland fire use and prescribed fire (Utah Fire Amendment, pg. A-40). Manage forest cover types to provide variety in stand sizes shape, crown closure, edge contrast, age structure and interspersions (Fishlake LRMP p. IV-99). Use prescribed fire to reduce fuel buildup and meet resource objectives (Fishlake LRMP p. IV-5). Reduce hazardous fuels; the full range of reduction methods is authorized, consistent with forest and management area emphasis and direction (Utah Fire Amendment, pg. A-41). Identify and improve habitat for sensitive, threatened and endangered species including participation in recovery efforts for both plants and animals. (Forest Plan IV-4). Improve or maintain the quality of habitat on big game winter ranges. (Forest Plan IV-4). Maintain structural diversity of vegetation on Management Areas dominated by forested ecosystems. (Forest Plan IV-11). Manage aspen for retention where needed for wildlife, watershed, or aesthetic purposes. (Forest Plan IV-11). Manage seral aspen stands for a diversity of age classes. (Forest Plan IV-11). Manage aspen to perpetuate the species and improve quality (Forest Plan IV-4).

The North American Mule Deer Restoration Plan states; proactively manage shrub communities (using prescribed fire, mechanical treatment, or other approaches as appropriate at a site specific basis) to maintain mosaics of uneven aged stands to enhance habitat conditions for mule deer.

In addition: The UDWR Statewide Management Plan for Mule Deer (2014) has the following goal and objectives: Habitat Goal: Conserve, improve, and restore mule deer habitat throughout the state with emphasis on crucial ranges. Habitat Objective 1: Maintain mule deer habitat throughout the state by protecting and enhancing existing crucial habitats and mitigating for losses due to natural and human impacts. Habitat Objective 2: Improve the quality and quantity of vegetation for mule deer on a minimum of 500,000 acres of crucial range by 2019.

The Utah State Wide Elk Plan covers this area and is managed under the South-Manti unit. RX fire would help maintain healthy big game populations.

Healthy Forest Restoration Act of 2003 (HFRA) identifies the following objective; reduce the risks severe wildfires pose to people, communities, and the environment. This project will further decrease the risk of catastrophic wildfire. National Fire Plan (2000) The National Fire Plan provides national direction for hazardous fuels reduction. This project will reduce fuels and further decrease the risk of catastrophic wildfire and the correlated risk to communities. The Monroe Mountain has communities listed on the Federal Register for Communities at risk and has developed and signed a Community Wildfire Protection Plan, to which this project assists.

Consistent with the Bonneville cutthroat trout Plan, Bald Eagle Recovery Plan, Sage Grouse Rec. Plan, Migratory Bird MOU and Turkey Plan.

Fire / Fuels:

N/A

Water Quality/Quantity:

N/A

Compliance:

2 PM Archaeology, Concurrence from the State Historic Preservation Office (SHPO) has been obtained., Jan 3 2015 / 6 NEPA, NEPA has been completed and implementation has begun. See attached EA, Decision Notice, and Finding of No Significant Impact. , Jan 3 2015

Methods:

Re-introduce fire to the ecosystem through prescribed burning to reduce hazardous fuels on 3,036 acres over the next 3 years. It will also be used in variety of different vegetation types including aspen and mixed conifer. Historically fire frequented the area every 20-40 years. The removal of fire from this ecosystem has created an older more even age class in all of the vegetative components in the area. The removal of fire has also caused a decline in the quality of the aspen habitat due to conifer invasion. Fire will naturally revitalize the area while creating a variety of age classes. Fire will be used to create a mosaic pattern. Mechanical thinning of 395 acres and associated prescribed fire of slash piles created by the thinning has been completed. This was done in preparation for safely and effectively being able to complete the 3,036 acres of broadcast prescribed fire units that still needs to be completed. Some prep work such as utilizing chainsaws to create ignition and/or control lines may occur prior to ignition in some areas.

Monitoring:

20 Plots/common stand exams involving transects for fuel loading, effective ground cover, tree data, etc... See attachment Monument Peak Report.

The District in coordination with BYU will continue monitoring the aspen. If the need arises the District will take the necessary administrative actions to reduce livestock related browsing impacts. The District and BYU will also monitor the aspen communities to determine if wild ungulate browsing is unsustainable. If the need arises the District will work with the Utah Division of Wildlife Resources to reduce wild ungulate browsing impacts. Monitoring is being done primarily by Dr. Sam St. Clair from Brigham Young University. See attached monitoring plan and browse thresholds. The attached monitoring plan has been reviewed and is supported by the Southern Region RAC, Utah Wildlife Board, and the Monroe Mountain Working Group.

Partners:

N/A

Future Management:

The District in coordination with BYU will continue monitoring the aspen. If the need arises the District will take the necessary administrative actions to reduce livestock related browsing impacts. The District and BYU will also monitor the aspen communities to determine if wild ungulate browsing is unsustainable. If the need arises the District will work with the Utah Division of Wildlife Resources to reduce wild ungulate browsing impacts. Monitoring is being done primarily by Dr. Sam St. Clair from Brigham Young University. See attached monitoring plan and browse thresholds. The attached monitoring plan has been reviewed and is supported by the Southern Region RAC, Utah Wildlife Board, and the Monroe Mountain Working Group.

Domestic Livestock Benefit:

N/A

BUDGET		WRI/DWR	Other	Budget Total	In-Kind Total	Grand Total
		\$240,000.00	\$419,112.53	\$659,112.53	\$156,000.00	\$815,112.53
Item	Description	WRI	Other	In-Kind	Year	
Seed (GBRC)		\$25,000.0	\$0.00	\$0.00	2017	
NEPA	USFS - Includes arch and wildlife clearances	\$0.00	\$0.00	\$50,000.0	2010	
Contractual Services	USFS Fuels National Wild Turkey Federation Stewardship contract for mechanical thinning of 395 acres. Mechanical thinning required prior to prescribed fire portions of the project	\$0.00	\$386,612.	\$0.00	2015	
Contractual Services	Helicopter seeding for 2 days at \$16,000/day	\$32,000.0	\$0.00	\$0.00	2016	
Personal Services (permanent employee)	USFS Rx Pile burning of Mx treated areas, project oversight and planning	\$0.00	\$0.00	\$15,000.0	2015	

Item	Description	WRI	Other	In-Kind	Year
Personal Services (permanent employee)	USFS Project oversight, planning, and implementation	\$0.00	\$0.00	\$20,000.0	2016
Personal Services (seasonal employee)	seasonal employees for prescribed fire preparation work	\$33,000.0	\$0.00	\$25,000.0	2016
Personal Services (seasonal employee)	USFS Hotshot Crew for ignition and holding.	\$40,000.0	\$0.00	\$0.00	2016
Equipment Rental/Use	3 Engine Modules (\$1,500/day/engine) with associate crew for successful prescribed fire implementation. \$4,500/day for 25 days	\$80,000.0	\$32,500.0	\$0.00	2016
Personal Services (seasonal employee)	Seasonal work force for successful prescribed fire implementation.	\$30,000.0	\$0.00	\$20,000.0	2016
Other	USFS SCA Monitoring	\$0.00	\$0.00	\$6,000.00	2010
Personal Services (seasonal employee)	USFS Prescribed fire of 395 acres of logging slash from the mechanical thinning portion of this project. Required prior to implementing the broadcast prescribed fire units of the project.	\$0.00	\$0.00	\$20,000.0	2015

FUNDING	WRI/DWR	Other	Funding Total	In-Kind Total	Grand Total
	\$240,000.00	\$419,112.53	\$659,112.53	\$156,000.00	\$815,112.53

Source	Phase	Description	Amount	Other	In-Kind	Year
USFS-WRI	N658		\$53,452.2	\$0.00	\$0.00	2017
USFS-WRI	N658		\$93,547.7	\$0.00	\$0.00	2016
MDF	NS652	N/A	\$5,000.00	\$0.00	\$0.00	2016
RMEF	NS652	N/A	\$10,000.0	\$0.00	\$0.00	2016
SFW	NS652	N/A	\$5,000.00	\$0.00	\$0.00	2016
Safari Club International	NS652	N/A	\$3,000.00	\$0.00	\$0.00	2016
Federal Aid (PR)	F1659	N/A	\$19,750.0	\$0.00	\$0.00	2016
USFS	N/A	N/A	\$0.00	\$419,112.	\$156,000.	2016
FFSL (pre-suppression)	N565	N/A	\$50,000.0	\$0.00	\$0.00	2016
Habitat Council Account	HCRF	N/A	\$250.00	\$0.00	\$0.00	2016

Allocation	Percent of Total
Big Game	100%
Upland Game	0%
Waterfowl	0%
Sport Fish	0%
Nongame Fish	0%
Nongame Wildlife	0%

EXPENSE	WRI/DWR	Other	Expense Total	In-Kind Total	Grand Total
	\$186,456.82	\$0.00	\$186,456.82	\$0.00	\$186,456.82

Source	Phase	Description	Amount	Other	In-Kind	Year
USFS-WRI	N658	N/A	\$0.00	\$0.00	\$0.00	
USFS-WRI	N658		\$93,547.7	\$0.00	\$0.00	2016
MDF	NS652		\$5,000.00	\$0.00	\$0.00	2016
RMEF	NS652		\$10,000.0	\$0.00	\$0.00	2016

Source	Phase	Description	Amount	Other	In-Kind	Year
SFW	NS652		\$5,000.00	\$0.00	\$0.00	2016
Safari Club International	NS652		\$3,000.00	\$0.00	\$0.00	2016
Federal Aid (PR)	F1659		\$19,750.0	\$0.00	\$0.00	2016
USFS	N/A	N/A	\$0.00	\$0.00	\$0.00	
FFSL (pre-suppression)	N565		\$50,000.0	\$0.00	\$0.00	2016
Habitat Council Account	HCRF		\$159.09	\$0.00	\$0.00	2016

Allocation	Percent of Total
Big Game	100%
Upland Game	0%
Waterfowl	0%
Sport Fish	0%
Nongame Fish	0%
Nongame Wildlife	0%

SPECIES		
Species	"N" Rank	HIG/F Rank
Mule Deer		1
Threat		Impact
No Threat		NA
Elk		2
Threat		Impact
No Threat		NA

HABITATS

PROJECT COMMENTS				
Comment	01/05/2015	Type: Project	Commenter	N/A
1 Helicopter and associated firing equipment and personel				
Comment	01/05/2015	Type: Project	Commenter	N/A
3 USFS agency engines and personel to be utilized for successful prescribed fire implementation				
Comment	01/16/2015	Type: Project	Commenter	Keith Day
<p>Kelly,</p> <p>There are some isolated talus habitats in this area that support small populations of American pika. Decreasing forest cover will likely benefit pika, but you should consider how best to accomplish this while avoiding negative impacts to pika.</p> <p>I have also consistently documented Three-toed Woodpeckers on this range, though mostly farther north. These are disturbed habitat birds (bug kills, fire scars), but it would be best not to burn over nest trees.</p> <p>Keith</p>				

Comment 01/17/2015 Type: Project Commenter Kelly Cornwall

I will talk to Kreig Rasmussen our biologist about your concerns and discuss some options. The project has a bit of flexibility to pick and choose where to burn and what to leave alone. Some further discussion with you, Kreig and myself would be great. Thanks

Comment 02/05/2015 Type: Project Commenter Vicki Tyler

Kelly, excellent project write-ups. I would ask the same question about the seed? No seeding needed? Also, talk to Kreig and Keith and see if you have more wildlife species that will primarily benefit from this project.

Comment 02/05/2015 Type: Project Commenter Kelly Cornwall

Thanks Vicki for the feedback. I will get with Kreig on what his thought are in regards to seeding. I know in the mixed conifer there would be no need, but some of the lower elevation areas might be of benefit.

Comment 02/09/2015 Type: Project Commenter Alan Clark

Kelly, are you hoping to do all of the proposed acres in this year?

Comment 02/09/2015 Type: Project Commenter Kelly Cornwall

No. We are hoping to complete the proposed 3,036 acres over the next 3 years burning approx. 1000 acres per year

Comment 02/10/2015 Type: Project Commenter Michael Golden

Hey Kelly, Looks like a good project. You may want to revisit your relationship to management plans section since the rules are you can only use 4 objectives per plan that you list. I am guessing you can pull some other objectives to maximize your points here. No rest or fence right off the bat? Future plans for Plan benefit fires, timber harvest, livestock management to help prevent need for future treatment? Wildlife monitoring?

Comment 02/10/2015 Type: Project Commenter Kelly Cornwall

Monitoring is going to take place by the district working with BYU for monitoring impacts to the Aspen. The Monroe Mountain working has developed a Threshold document for the Monroe Aspen as somewhat of an action plan to protect aspen regeneration if deemed necessary by monitoring. To answer your question there will be no fence right away until it is a last resort. Yes the pasture will be rested after working with our range specialist. Planned benefit wildfires are an option but may have a few constraints and /or a limited window they would even be allowed due to close proximity of private inholdings. No future plans of timber harvest. The timber/mx treated portions of this project are complete in preparation for this phase of broadcast prescribed fire to begin.

COMPLETION

Start Date:

03/27/2016

End Date:

10/14/2016

FY Implemented:

2016

FY Completed:

2017

Final Methods:

Prescribed fire was successfully implemented using both aerial and ground ignition methods to burn in a mosaic burn pattern with mixed severities. Seed was applied by helicopter to a majority of the burn area.

Project Narrative:

Prescribed fire was successfully applied to the landscape in both the mixed conifer/aspen and mountain brush fuel types. A stand replacement fire was implemented in the mixed conifer to reduce hazardous fuels and promote aspen regeneration. Aspen regeneration occurred post burn during the summer of 2016. approx. 2-4 feet tall aspen is present within the upper elevation stand replacement burned areas.

Future Management:

Aspen regeneration will be monitored by BYU. Aspen thresholds will be monitored and future actions to mitigate aspen over browsing will be implemented as necessary in conjunction with the DWR, USFS. Cattle grazing and rest periods will be coordinated through our local range specialist in conjunction with the permittees. Range monitoring plots have been established in the lower elevation mixed brush areas to monitor range condition post burn.

Map Features

ID	Feature Category	Action	Treatment/Type
5481	Terrestrial Treatment Area	Prescribed fire	Prescribed fire